

Application Serial No.: 10/784,202  
Reply to Office Action dated July 24, 2006

REMARKS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1-5, 7-9, 12-16, and 18-21 are presently active in this case, Claims 1, 3, 4, and 12-15 having been amended by way of the present Amendment. Claims 6, 10, 11, 17, and 22-31 have been canceled without prejudice or disclaimer. The Applicants request the entry of the amendment set forth herein as they are believed to place the application into condition for allowance.

Claims 5, 7-9, 16, and 18-21 have been allowed.

Claims 3, 4, and 13-15 were indicated as being allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 3, 4, and 13-15 have been rewritten in independent form including all of the limitations of their respective base claims, and thus these claims are in condition for allowance.

In the outstanding Official Action, Claims 1, 2, and 12 were rejected under 35 U.S.C. 103(a) as being unpatentable over Koji (Japan 2001-038272) in view of Tateyama et al. (U.S. Patent No. 5,919,520). For the reasons discussed below, the Applicants request the withdrawal the obviousness rejection.

The basic requirements for establishing a *prima facie* case of obviousness as set forth in MPEP 2143 include (1) there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings, (2) there must be a reasonable

expectation of success, and (3) the reference (or references when combined) must teach or suggest all of the claim limitations. The Applicants submit that a *prima facie* case of obviousness cannot be established in the present case because the references, either when taken singularly or in combination, do not teach or suggest all of the claim limitations.

Claims 1 and 12 of the present application recite a process liquid supply nozzle including, among other features, a nozzle holder driving mechanism configured to drive the nozzle holder relative to the nozzle in a vertical direction between a position where the nozzle is accommodated in the nozzle holder, and a position where the nozzle protrudes from the through-hole. Additionally, Claim 1 recites controlling means for controlling a supply mechanism of the cleaning liquid and supply of a process liquid, such that the cleaning liquid is supplied into the free space to clean the nozzle when the nozzle holder is placed at the position where the nozzle is accommodated in the nozzle holder, and the process liquid is discharged from the nozzle when the nozzle holder is placed at the position where the nozzle protrudes from the through-hole, and Claim 12 recites controlling means for controlling the cleaning liquid supply mechanism and the process liquid supply mechanism, such that the cleaning liquid is supplied into the free space to clean the nozzle when the nozzle holder is placed at the position where the nozzle is accommodated in the nozzle holder, and the process liquid is discharged from the nozzle when the nozzle holder is placed at the position where the nozzle protrudes from the through-hole. The Applicants submit that the cited references, either when taken singularly or in combination, do not disclose all of the above limitations.

The Koji reference describes a solution supply nozzle that includes a nozzle holding body (100) that has a large diameter pipe (132) penetrating therethrough and a small diameter

pipe (134) provided therein. The small diameter pipe (134) has a discharge outlet (133 at the tip for discharging a solution, and the large diameter pipe (132) has a discharge outlet (131). The Koji reference describes three holding member (135) for holding the small diameter pipe (134) at a prescribed position in the inside of the large diameter pipe (132).

The Koji reference does not disclose or even suggest a nozzle holder driving mechanism configured to drive the nozzle holder relative to the nozzle in a vertical direction between a position where the nozzle is accommodated in the nozzle holder, and a position where the nozzle protrudes from the through-hole. The Official Action cites the small diameter tube (134) for the teaching of the nozzle, and components (135) for the teaching of the nozzle holder. However, the components (135) are described and depicted as retaining the small diameter pipe (134) at a prescribed position in the inside of the large diameter pipe (132). Thus, the components (135) and the large diameter pipe (132) cannot be driven relative to the small diameter pipe (132) in a vertical direction. In fact, the large diameter pipe (132) cannot be moved in any manner relative to the small diameter pipe (132), and no driving mechanism is provided to provide such motion.

Thus, the Koji reference does not disclose or even suggest a nozzle holder driving mechanism configured to drive the nozzle holder relative to the nozzle in a vertical direction between a position where the nozzle is accommodated in the nozzle holder, and a position where the nozzle protrudes from the through-hole. Furthermore, the Applicants submit that the Tateyama et al. reference does not supplement the deficiencies noted above in the teachings of the Koji reference.

The Tateyama et al. reference describes a coating apparatus that has a movable beam provided above a spin chuck. The movable beam is described as including first and second nozzles integrally formed. (See Abstract, and Figures 6A and 6B.) The first nozzle (21) is used for supplying a photo-resist liquid, and the second nozzle (22) is used for supplying a solvent for the photo-resist liquid. The movable beam (20) is indicated as being movable in an X direction and a vertical Z direction by scanning mechanism (40).

The Tateyama et al. reference does not disclose or even suggest a nozzle holder driving mechanism configured to drive a nozzle holder relative to a nozzle in a vertical direction between a position where the nozzle is accommodated in the nozzle holder, and a position where the nozzle protrudes from the through-hole. As noted in the Tateyama et al. reference, the movable beam (20) is an integral structure that includes first and second nozzles. The Tateyama et al. reference does not disclose a nozzle holder with a nozzle accommodated therein and a nozzle holder driving mechanism configured to drive the nozzle holder relative to the nozzle, as recited in Claims 1 and 12.

Accordingly, the Applicants submit that the cited references, either when taken singularly or in combination, do not disclose all of the limitations recited in Claims 1 and 12. Thus, the Applicants respectfully request the withdrawal of the obviousness rejection.

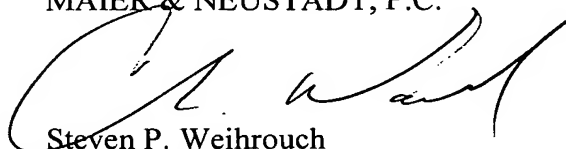
Claim 2 is considered allowable for the reasons advanced for Claim 1 from which it depends. This claim is further considered allowable as it recites other features of the invention that are neither disclosed nor suggested by the applied references when those features are considered within the context of Claim 1.

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Consequently, in view of the above discussion, it is respectfully submitted that the present application is in condition for formal allowance and an early and favorable reconsideration of this application is therefore requested.

Respectfully Submitted,

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